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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,286	02/20/2002	Peter R. Jepson	06160-1P67	6625

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EXAMINER

ZHENG, LOIS L

ART UNIT PAPER NUMBER

1742

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/079,286

Applicant(s)

JEPSON ET AL.

Examiner

Lois Zheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims.***

1. Claims 1 and 3 -7 are amended in view of the amendment filed 20 September 2004.

Claims 2 and 8-25 are cancelled.

Therefore, claims 1 and 3-7 are currently under examination.

### ***Status of Previous Rejections***

2. Applicant's arguments, see pages 5-6 of the amendment, filed 20 September 2004, with respect to claims 1-5 being anticipated by Michaluk et al US. 6,348,113 have been fully considered and are persuasive. The rejection of claim 1-5 being anticipated by Michaluk et al US. 6,348,113 has been withdrawn.
3. Applicant's arguments, see pages 6-7 of the amendment, filed 20 September 2004, with respect to claims 1-7 being anticipated by International Application WT 99/66100 A1 have been fully considered and are persuasive. The rejection of claims 1-7 being anticipated by International Application WT 99/66100 A1 has been withdrawn.
4. Applicant's arguments, see page 8 of the amendment, filed 20 September 2004, with respect to claims 1 and 3 being anticipated by Japanese Patent JP 2000-104164 have been fully considered and are persuasive. The rejection of claims 1 and 3 being anticipated by Japanese Patent JP 2000-104164 has been withdrawn.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Turner US 6,331,233(Turner).

The teachings of Turner are discussed in paragraph 4 of the previous Non-Final Office Action. The rejection ground is maintained for the same reason as stated in paragraph 4 of the previous Non-Final Office Action.

With respect to amended features in claim 1 of the instant invention, Turner teaches a tantalum sputtering target having an uniform texture through out the target thickness including a mix of {100} and {111} crystal orientation(col. 1 line 11, table 1). Therefore, with broadest interpretation, it would be inherent that the uniform texture would also be uniform across the surface of any plane that is orthogonal to the thickness of the target. In addition, since the sputtering target of Turner is uniform in texture through out the target thickness, it would also imply that the variations in

distribution of {100} and {111} crystallographic orientation would be small, which would read on less than 30% as recited in amended feature (ii).

Therefore, Turner anticipates claims 1-5 of the instant invention.

7. Claims 1-3 and 6-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Michaluk et al US Patent Application Publication 2002/0072475 A1(Michaluk '475).

The teachings of Michaluk '475 are discussed in 4th full paragraph on page 4 of the previous Non-Final Office Action. The rejection ground is maintained for the same reason as stated in 4th full paragraph on page 4 of the previous Non-Final Office Action.

With respect to amended feature in claim 1 of the instant invention, Michaluk '475 teaches a niobium sputtering target having an uniform texture including a mix of {100} and {111} crystal orientation(paragraph 0017 and 0019). Therefore, Michaluk '475 anticipates claims 1-3 and 6-7 of the instant invention for the same reasons stated in paragraph 6 above.

### ***Response to Arguments***

8. Applicant's arguments of rejection of claims 1-5 being anticipated by Turner filed 20 September 2004 have been fully considered but they are not persuasive.

In the remarks, applicant argues that Turner does not disclose a sputtering target that

(a) is uniform both through the thickness of the target and from the center to the edge of the target,

- (b) have a distribution of {100} and {111} crystallographic orientation that varies by less than 30% both across any thickness of the target and across the surface of any plane that is orthogonal to the thickness of the target, and
- (c) Turner's sputtering target would have a non-uniform texture as a result of Turner's stage-2 deformation.

With respect to applicant's argument (a), Turner teaches a tantalum sputtering target having an uniform texture through out the target thickness including a mix of {100} and {111} crystal orientation(col. 1 line 11, table 1). Applicant is reminded that the examiner is construing the claim with broadest interpretation. Therefore, the examiner finds that target thickness would read on both horizontal and vertical planes. The tantalum sputtering target of Turner having an uniform texture through out the target thickness would read on a metal plate with uniform texture both through the thickness of the target(i.e. in a vertical direction) and from the center to edge of the target(i.e. in a horizontal direction) as recited in claim 1 of the instant invention.

With respect to applicant's argument (b), since the tantalum sputtering target of Turner is uniform in its texture, it would be inherent that the distribution of {100} and {111} crystallographic orientations would not significantly, which would inherently read on a distribution of {100} and {111} crystallographic orientation that varies by less than 30% both across any thickness of the target and across the surface of any plane that is orthogonal to the thickness of the target as recited in claim 1 of the instant invention.

With respect to applicant's argument (c), the applicant is reminded that conclusory statements, such as applicant's argument (c) and the supporting discussion,

are not probative unless supported by facts. Ex parte Gray 10 USPQ 2d 1922 (BPAI 1989) ; In re DeBlauwe 222 USPQ 191, 196 (Fed. Cir. 1984).

9. Applicant's arguments of rejection of claims 1-5 being anticipated by Michaluk '475 filed 20 September 2004 have been fully considered but they are not persuasive.

In the remarks, applicant argues that

(a) the niobium sputtering target of Michaluk '475 is not particularly uniform,

(b) Michaluk '475 does not disclose a niobium sputtering target that is uniform both through the thickness of the target and from the center to the edge of the target, and

(c) Michaluk '475 does not disclose a niobium sputtering target that have a distribution of {100} and {111} crystallographic orientation that varies by less than 30% both across any thickness of the target and across the surface of any plane that is orthogonal to the thickness of the target.

With respect to applicant's argument (a), the applicant is reminded that conclusory statements, such as applicant's argument (a) and the supporting discussion, are not probative unless supported by facts. Ex parte Gray 10 USPQ 2d 1922 (BPAI 1989) ; In re DeBlauwe 222 USPQ 191, 196 (Fed. Cir. 1984).

With respect to applicant's argument (b), Michaluk '475 teaches a niobium sputtering target having an uniform texture including a mix of {100} and {111} crystal orientation(paragraph 0017 and 0019). The examiner asserts that the tantalum sputtering target of Michaluk '475 having an uniform texture read on a metal plate with uniform texture both through the thickness of the target(i.e. in a vertical direction) and

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from the center to edge of the target(i.e. in a horizontal direction) as recited in claim 1 of the instant invention for the same reason as stated in paragraph 8 above.

With respect to applicant's argument (c), the examiner also asserts that the uniform texture of Michaluk '475's niobium sputtering target would inherently read on a distribution of {100} and {111} crystallographic orientation that varies by less than 30% both across any thickness of the target and across the surface of any plane that is orthogonal to the thickness of the target as recited in claim 1 of the instant invention for the same reason as stated in paragraph 8 above.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LLZ  
11/23/2004

  
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